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SIR PATRICK DUN'S HOSPITAL.*

PROCEEDINGS OF THE FIFTH MEETING OF THE
BRITISH ASSOCIATION FOR THE ADVANCE-
MENT OF SCIENCE.

We presume there are few of our readers who have not heard of the British Association, and of its recent very interesting meetings in this city. It was at one time our intention to give a brief abstract of the entire proceedings of those meetings as they occurred, but we were compelled to abandon the idea, from the utter impossibility of accomplishing it, with any degree of satisfaction to ourselves or our readers. Our limited space, the neces-

* As we give the above engraving in the way of an introduction to our review of the Meetings of the British Association—its first meeting in this city having taken place in the Library and Museum of that Institution—we shall content ourselves by saying of it, at present, that Sir Patrick Dun having bequeathed estates for establishing professorships in the College of Physicians, and other medical purposes, it was resolved, in 1800, to found this establishment, which may be regarded in two distinct points of view; first, as an asylum for the diseased poor; and secondly, as connected with the School of Physic, likely to afford the student an opportunity of seeing the most critical diseases treated by experienced professors.

The building forms a handsome front of 194 feet, consisting of a centre and two wings, neatly ornamented. It is calculated to receive 100 patients, and the wards are ventilated on the plan recommended by Mr. Howard, in his work on lazarettos. In the rear of the centre is a lecture-room, 42 feet by 31, in which the professors lecture twice a week on the cases of the patients, and explain the nature of their practice.

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sity of having several weeks' Journals in advance, and the fact of *seven* meetings having been held each day during the week, at one and the same hour—(a correct report of the proceedings of any one of which would have occupied two or three sheets such as our sheet is)—all combined to render the undertaking impracticable. However, considering the very great importance of such associations in a country situated as Ireland is, we were induced to publish a Report of the Proceedings in a separate form, which extended to nearly one hundred and fifty closely printed quarto pages,* and which gives an accurate though succinct account of all that occurred during the entire week. From this we shall give such extracts as may appear sufficiently interesting for the general class of readers who patronise our little publication, more especially such as have reference to Ireland. We may remark, indeed, that a very large proportion of the papers which came before the sections, were either of too learned, too scientific, or too dry a nature to suit our pages. As a preface to the extracts we purpose making, a very brief outline of the origin and objects of the Association may not be considered uninteresting.

The British Association for the advancement of Science, was founded in the year 1831. It owed its origin to some distinguished cultivators of science, who were of opinion that great advantage might be expected

* The Report is illustrated by several Maps, Tables, and Diagrams, one or two of which we purpose giving in our next.

from an Association for scientific intercourse in these kingdoms, formed upon the model of that which has subsisted in Germany for several years.

The objects of the Association are officially stated in its reports to be—"to give a stronger impulse and a more systematic direction to scientific inquiry,—to promote the intercourse of those who cultivate Science in different parts of the British Empire, with one another, and with foreign philosophers,—to obtain a more general attention to the objects of Science, and a removal of any disadvantages of a public kind, which impede its progress."

"The methods proposed are new, and therefore cannot place the Association in collision with any other Society. It has never yet been seen in this country, that twenty Chemists, for instance, or twenty Mineralogists, have met together, for the purpose of settling the nomenclature of their respective sciences, or attempting to fix with one consent the foundation on which they rest. It has never yet been seen, that the Chemical, Mineralogical, and Optical inquirers have assembled for the purpose of mutually explaining and learning what light the sciences of Chemistry, Mineralogy, and Optics are capable of reflecting reciprocally upon each other.

"The principles which regulate the subjects of investigation are important to be borne in mind, namely, to come to a common understanding on unsettled questions of general interest, to fix the data upon which important points of theory hinge, to collect and connect extensive series of observations; these appear to be the objects which peculiarly belong to the Association, and which should, therefore, be chiefly, if not exclusively, contemplated."

"What numberless suggestions, what a number of valuable but abortive hints are continually floating in the thoughts of philosophers, for the pursuit of which, time is wanting to themselves! We have among us, scattered through the country, men willing to adopt these unexecuted hints, as they arise out of the profound and varied meditations of more experienced minds, men not incapable of surveying with accuracy a limited district, though they may not pretend to draw the general outline of the map, or fill up the whole of its details. Many such there are who only wait for instructions, and who require no other stimulus than that of being invited, to render the most essential service to researches and calculations of the highest order; and it is upon this ground especially that we venture to pronounce an Institution wanting, which shall not hesitate to make such invitations and to offer such instructions."

"The object of this system is not only to give connexion to the efforts of insulated inquirers, but to link Societies themselves together in unity of purpose, and in a common participation and division of labour. There are many important questions in philosophy, and some whole departments of science, the data of which are geographically distributed, and require to be collected by local observations extended over a whole country; and this is true not only of those facts on which single sciences are founded, but of many which are of more enlarged application. Thus, for instance, were the elevation above the sea of all the low levels, and chief heights and eminences, of a country ascertained so generally, that every observer of nature might have a station within his reach from which he could fix the relative position in this respect of whatever might be the object of his research,—of how many questions, in how many sciences, would these facts contribute to their solution? Again, supposing it to be ascertained also, at these stations, what is the temperature of the air, and of the water—as it falls from the sky, and as it is held in the reservoirs of the earth—these are the data of the same kind, interesting not only to meteorological science, but to the philosophy of organized and animated existence. Yet, extensive as might be the importance of such facts, and simple as are the processes for ascertaining them, and numerous as are the individuals capable of contributing to their investigation, how little, nevertheless, even of this elementary work, has yet been accomplished, either by insulated observers, or by those who are associated

together for the express purpose of advancing the sciences to which it is of such essential interest.

"When individuals meet for scientific objects, the effect of the general effort, emulation, and example, is to produce a spirit of exertion which gives to such meetings their principal value. And if Societies shall concur in thus meeting each other, in proposing certain common objects, in communicating from year to year the means which they are employing, and the progress which they are making, it seems impossible that this should be done in the presence of an assembly concentrating a great part of the scientific talent of the nation, without kindling an increased ardour of emulous activity; it seems impossible that the deputies of any Society should attend such meetings without bringing back into its bosom an enlargement of views, and communicating to its members new lights of knowledge, new motives for inquiry, and new encouragement to perseverance."

Such were the origin and objects of the British Association, and, with these objects in view, it held its First General Meeting at York, in 1831—the second, in Oxford—the third, in Cambridge—and the fourth in Edinburgh; it was at the last mentioned meeting resolved, in compliance with pressing invitations, received from the Board of Trinity College, the Royal Irish Academy, and the Royal Dublin Society, that the Fifth General Meeting of the Association should take place in Dublin, 10th August, 1835; and it is gratifying to be able to say, that it was acknowledged on all hands to be the most splendid of any of the meetings of the Association which have yet been held.

Early in the week preceding that on which the meetings of the Association took place in Dublin, the city began to be crowded with members from various quarters.

Accommodations were provided for a great number of the guests within the walls of the College, and arrangements made for their breakfasting and dining together in the College Hall, by which the intercourse between the members was greatly facilitated.

The hospitalities of private life were also liberally exercised; and indeed so perfect were the arrangements, that we believe not a single individual had to complain of want of attention or neglect. As, however, it would have been impossible to provide free accommodations for all, arrangements were made at Morrisson's, the first hotel in the city, by which those members of the Association who wished to dine together, might do so at a reduced rate, the surplus having been paid out of a local fund, raised for the purpose of bearing this and all other incidental expenses. There was also a dinner provided at Marsh's, Salt hill, on Thursday, the 13th, where nearly three hundred members dined.

Plans of the tables were shown in the Hall of Trinity College, so as to enable members to select their places, and no gentlemen, except members of the Association, were admitted to any of the ordinaries.

The Examination Hall, Trinity College, was appointed as the place of general rendezvous; and on the mornings of Friday and Saturday preceding the week of the regular meetings, it presented a most interesting and animated scene. It was literally crowded with scientific and learned men, among whom were many of the most eminent characters of the present day—Professors from Cambridge, Oxford, and Edinburgh—some from the Continent, and a numerous assemblage of the literati of our own land.

The General Meetings of the Association were held in the rooms of the Rotunda, on Monday, Wednesday, and Friday, in the evening; and there was a concluding meeting on Saturday, before dinner. The members assembled in the same rooms on the evenings of Tuesday, Thursday, and Saturday; and the Rotunda Gardens were lighted up as a promenade on these latter evenings. The chair was not taken, although several interesting matters were brought forward. A limited number of Ladies' Tickets were issued for the General and Evening Meetings in the Rotunda—in the supper rooms of which, ices, fruits, tea, coffee, &c. &c. were supplied in the utmost profusion, the expense being met by the Local Subscription Fund. On these occasions nearly two thousand persons assembled every evening during the week.

In the general rules of the Association it is stated, that the Fellows and Members of Chartered Literary and Philosophical Societies in the British Empire publishing Transactions, shall be entitled to become Members of the Association.

The Office-Bearers and Members of the Councils, or managing Committees, of Philosophical Institutions shall be entitled, in like manner, to become Members of the Association.

All Members of a Philosophical Institution recommended by its Council or Managing Committee, shall be entitled, in like manner, to become Members of the Association.

Persons not belonging to such Institutions, shall be elected by the General Committee or Council, to become Members of the Association, subject to the approval of a General Meeting.

The amount of the Annual Subscription shall be One Pound, to be paid in advance upon admission; and the amount of the composition in lieu thereof, Five Pounds.

As an introduction to the meetings, or rather by way of introducing such of the eminent strangers as had arrived, on the Saturday preceding the week on which the regular meetings took place, the Royal College of Physicians held a kind of *conversazione* in the Library and Museum of Sir Patrick Dun's Hospital; of which building the sketch in our first page is a tolerably correct representation.

We have already mentioned that there were seven meetings held each day, for the discussion of different subjects, and the reading of papers connected with the particular objects of each meeting, viz.—Mathematics and Physics, Chemistry and Mineralogy, Geology and Geography, Zoology and Botany, Anatomy and Medicine, Statistics, and a Sub-Section, subsequently formed, for Mechanical Science applied to the Arts.

In these were assembled, each day during the week, men of the first rate talents in their various professions; and cold and lifeless must have been the man, who would not catch some sparks of fire from the scintillations of genius and talent which sparkled around.

On the abstract question of the amount of advantage to be derived to science from such meetings as those of the Association, much has been said. It has been observed, that as education usually derives more from the principle of exciting emulation, or the desire of excelling others, than from that of pointing out the deep-rooted pleasure to be plucked by its cultivators from knowledge itself, it cannot be doubted that they do good by affording the excitement rendered necessary by habit; and by furnishing an arena into which the most illustrious competitors for mental distinction may deem it honorable to enter. Experience has demonstrated that the meetings of such bodies exercise a powerful attraction on men of intellect drawn around their foci; while there can be no question that the interest of scientific subjects brought forward at such meetings, is greatly heightened by *visd voce* discussion, nor is the result of those animated debates limited to transitory gratification; the advantages springing from them are far more important. Whilst such a system continues it is scarcely possible that truth should remain obscured or hidden, or that error should stalk on unexposed. In the stream of light poured out by the great luminaries of science, the tints of the one glow with increasing brilliancy, whilst the false colours of the other fade away and sink into the shade. Often, indeed, would the gem have remained unnoticed among obscuring heaps of worthless rubbish, had not this concentrated light shone upon and called it, as it were, into bright existence. The pleasures of such meetings, however, can only be felt and appreciated by those who have had the happiness of being present at them.

As we have already intimated, it is not our intention to give any lengthy or connected account of the sectional or other meetings, we must content ourselves with making such isolated extracts as may appear to us suitable for our publication, and even these we are obliged to defer to future numbers. For the present we would merely observe, in the language already employed in

the conclusion of the Report, that the meetings of the week were as interesting and important as any ever held in the metropolis of Ireland. It was a week during which party and politics appeared to be forgotten—a week which will long be remembered by those who had the happiness of witnessing the kind and generous feeling which prevailed, and of listening to the remarks and observations of the numerous learned and scientific men, thus convened together. And it may here be well to say, that while those members of the Association who visited Ireland, were entertained with the hospitality it is natural for Irishmen to show to strangers, the real objects of the Association were not neglected. We do hope, however that measures will be taken to keep up the excitement awakened with regard to scientific pursuits, as nothing would render a greater service to the country. In our abounding population we have a sufficiency of mere animal labour, but to enable us to compete with England or Scotland, we must have that animal labour trained by mental discipline—we want science—we want our mechanics not to be mere machines—and, we sincerely trust, that the suggestions thrown out by Mr. Reid, in the meeting on Thursday, will be taken up in the various great towns of Ireland, by those whose situation in life may enable them to carry his recommendations most efficiently into practice; in this way the beneficial influence of the efforts of the British Association will circulate from one class to another, and finally extend itself even to the very lowest grade in the community.

On delivering his views upon a plan tried in Edinburgh, for the extension of the study of physics, Dr. Reid proposed to have large classes formed for observing chemical experiments, and that nothing should be employed in these which were not easily procurable by every person. A bit of glass, such as glaziers throw away, a piece of charcoal, and a blow-pipe would be instruments enough with which to make from one hundred to one thousand experiments, and these would illustrate the essential operations of chemistry. By this means a peculiar knowledge would be obtained, and the mode of conducting an examination on a small scale. Dr. Reid here made some experiments on a small piece of glass, and afterwards on paper, showing the formation of crystals, &c. &c., and the effects were as distinctly marked as could be desired. He recommended that the pupils should write down on paper at the time, the changes observed by them during the experiments. Dr. Reid then made several beautiful experiments by applying tests to liquids and solids. Having taken some lead ore, and added nitric acid to it, myriads of little globules were at once reduced from the ore, and fell upon the paper.

He observed, that a common beer bottle with a tube, and another bottle for a receiver, would answer for the preparation of gases; and that the conducting of operations on a small scale was the better for the student, as the substances passing from one state to another were distinctly seen in a simple apparatus. From calculations made in different places he found that from £2 to £3 would provide apparatus and materials sufficient to show many thousand experiments. The great object was to render this department of knowledge accessible to all persons, and as to the time its study should be commenced, he (Dr. Reid) would say from three to nine years of age would not be too early. This species of information was easier of acquisition than that of language. The greatest difficulty with children was to arrest their attention, on account of the liveliness of their sensations, and abstract subjects were not sufficient to excite interest. Objects in external nature they observed, and were ready to attend to any instruction afforded in reference to them. The talented lecturer then noticed the necessity of persons devoting a short time to understand the principal practical results of chemistry in relation to the knowledge of the purity of water, the component parts of agricultural materials, &c. &c. This species of knowledge would be of the highest utility to the emigrant, and by imparting it to the natives of the district in which he located himself, he would be elevating the character of his own countrymen, and receiving the friendship and support of his